



VTC-IRE30/2810 **Day/Night IR Bullet Camera** **with 100' Range**



- High Density 1/3" Sony EX-VIEW CCD & Effio-E DSP
- 700 TV Lines of Resolution
- Advanced IR Optimizer helps reduce over saturation of IR illuminated video without engaging the Image Signal Processor chip
- E-WDR by Adaptive Tone Reproduction
- 30 850nm Infrared LEDs with up to 100' Range
- 0.003 Lux (F1.2 @ 40IRE) / 0 Lux with IR LEDs On
- IR Corrected 2.8-10mm Varifocal DC Auto Iris IR Lens
- 2DNR Noise Reduction
- Motion Detection, Privacy Masking & Highlight Masking
- OSD (On Screen Display) menu and Camera ID
- IP-66 Rated Water Resistance
- Heavy Duty Mount with Cable Feed Through
- 24VAC/12VDC Dual Voltage

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

Caution

To prevent electric shocks and risk of fire hazards, do NOT use other than specified power source.

Warning (NTSC version) -- This equipment has been tested and found to comply with the limits for a Class

A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This

equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation

of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Caution -- Any changes or modifications in construction of this device that are not approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice -- The images used in this manual are processed to help comprehension and may differ from the actual video of the camera.

WARNING

NEVER USE THIS CAMERA IN WATER.

1. Safety Instructions and Notes

- Please read these safety and operating instructions before putting the camera into operation.
- Keep the manual in a safe place for later reference.
- Pay attention to safety when laying the connection cable and observe that the cable is not subjected to heavy loads, kinks, damage or moisture.
- Never open the device to expose boards or lenses.
The warranty becomes void if repairs are undertaken by unauthorized persons.
- Only authorized service centers may perform maintenance or repairs.
- Use only a mild detergent to clean the housing.
- Keep the window surface clean of dirt or dust, which may reflect infrared light into the lens at night.
- The camera should never be operated beyond the technical specifications. This can lead to destruction.

2. General Descriptions

This camera is an ultra clear resolution camera that realizes over 700TVL resolution and a crisp color reproduction with Sony 960H EX-view CCD and Effio-E image signal processor.

Effio-E digital imaging system:

- Delivers crystal clear images with over 700TVL resolution that accurately captures every aspect of any scene
- Color signal processing provides optimum balance between luminance and chroma signals for high color reproducibility, even for the detail scene which contains very high spatial frequency
- Incorporates 2-D noise reduction signal processing

24VAC/12VDC dual power design:

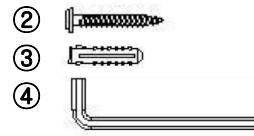
- Offers flexibility of installation
- Ensures reliability

Main features:

- High Density 1/3" Sony EX-view CCD (960H)
- Resolution 700 Horizontal Lines
- E-WDR by ATR (Adaptive Tone Reproduction)
- 2-D noise reduction
- Motion Detection
- Privacy Mask function
- OSD menu and camera ID
- Switches to B/W and able to accept the infrared spectrum at night mode
- Very low noise and superior picture quality
- Sensitivity of 0.003Lux (F1.2@40IRE)
- Automatic White Balance (ATW)
- Support C/CS mount DC Drive auto iris lens
- Supply voltage: 24Vac/12Vdc Dual voltage

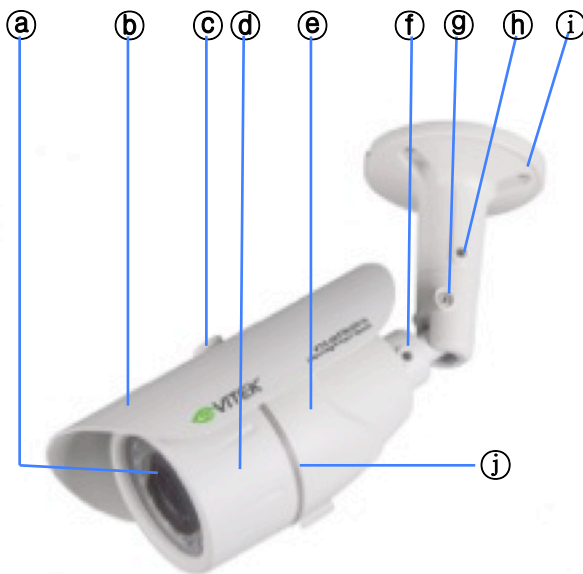
3. Supplied Items

- ① 1 x Weatherproof D & N Bullet Camera
- ② 3 x Mounting screws
- ③ 3 x anchors
- ④ 1 x 2.5mm L-Wrench
- ⑤ 1 x Installation and Operating Instructions



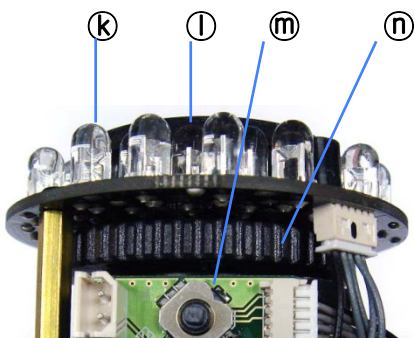
4. Part names

4.1 External (Below model is only used for understanding. Color or Design can be different.)



- Ⓐ Glass Window
- Ⓑ Sunshield
- Ⓒ Thumb screw for Sunshield
- Ⓓ Lens/IR LED Access Cover
- Ⓔ Camera Body
- Ⓕ Mount Rotation Adjustment
- Ⓖ Mount Tilt Adjustment
- Ⓗ Mount Pan Adjustment
- Ⓘ Mounting bracket
- ⓵ Rubber gasket

4.2 Internal



- Ⓚ Infrared LEDs (X30)
- Ⓛ Lens Hood
- Ⓜ OSD board
- Ⓝ Focus Ring
- Ⓞ Zoom Knob

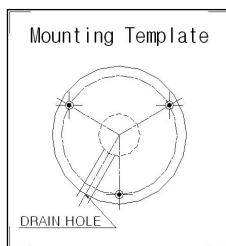


5. Installation Instructions

- Make sure the power is not applied before the installation.
- Once the camera is installed, you may first connect the low voltage (AC24V or DC12V) wire to the camera power connector, then plug the AC adapter to the AC outlets to avoid an improper reset from power jitter and possible damage from voltage surge.

5.1 Mounting the Camera

- 1) Drill 3 holes into the wall or ceiling using the supplied template
- 2) Insert the supplied anchors into the drilled holes
- 3) Route the power/ video cable through the camera mount.
- 4) Match foot mount holes to the drilled holes
- 5) Affix the mounting bracket by using supplied screws



6) Adjust the camera direction as below steps.

Direction I: Adjust the camera direction with ① screw for Pan-direction.

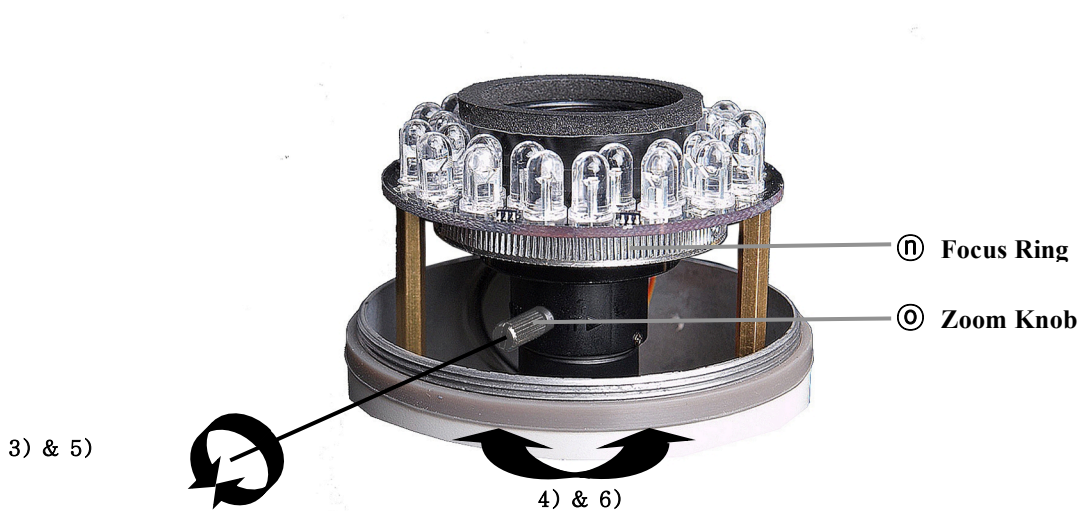
Direction II: Adjust the camera direction with ② screw for Tilt-direction.

Direction III: Adjust the camera direction with ③ screw for rolling.

5.2 Setup of ZOOM and FOCUS

• Adjust zoom and focus in order.

- 1) Open ④Front cover for adjustment.
- 2) Place the separated ④Front cover on the safe place from water & dust.
- 3) Turn ③Zoom knob counter clockwise a little to unlock the knob.
- 4) Move ③Zoom knob to fit the zoom. (Wide ↔ Tele)
- 5) Turn ③Zoom knob clockwise a little to lock the knob.
- 6) Using thumb and index finger, turn ②Focus ring to fit the focus. (Far ↔ Near)
- 7) Close and tighten ④Front cover. (See CAUTION below)



** IMPORTANT TIP for good focus adjustment*

- Step 1. Turn Iris Level adjustment VR clockwise to max position.
- Step 2. Set ELC switch to ON at DIP switches.
- Step 3. Adjust zoom knob and focus ring of lens.
- Step 4. Set ELC switch to OFF at DIP switches.
- Step 5. Adjust Iris Level VR to get the proper video level.

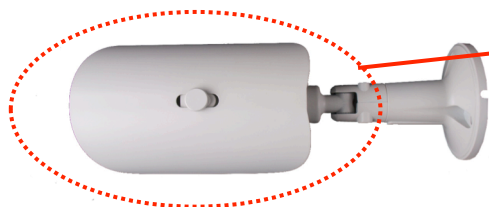


CAUTION

When assembling ④Front cover, be sure that ①Rubber sealing is not protrusive. If ④Front cover is tightened excessively, sealing may not be ensured.

5.3 Sunshield

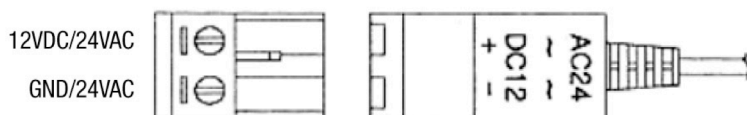
Camera can be protected from the strong sun light by its own Sun shield.
Sunshield must be tightened enough to the body to avoid detaching of it by the wind.



When the sunshield is fixed on camera body, usually
©**Fix screw for Sunshield** is located in center of screw hole.
Adjust the sunshield back or forth according to the wide or tele position of the lens.
If shades by the sunshield are seen on the image, reverse the sunshield direction backside to front.

5.4 Power connector

The VTC-IRE30/2810 can operate on either 24AC or 12VDC, dual voltage power.
Polarity free connection is acceptable, but follow the indication if possible.



6. SETUP Menu

6.1 In the menu

Setup menu can be accessed and controlled by OSD control joy stick on the side of the camera.
Five commands are available with the joy stick.



SYMBOL descriptions for joystick operation;

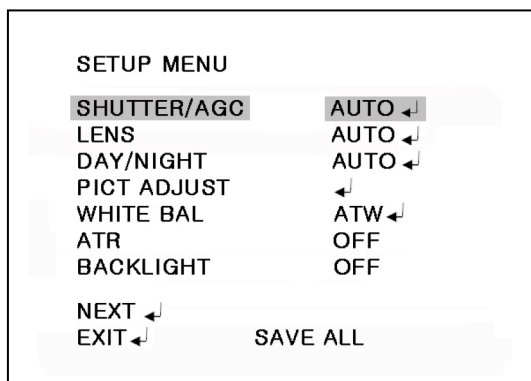
1. ▲, ▼, ◀, ▶ - Denotes the direction of Joystick lever operation.
2. ● - Denotes pressing down on the Joystick lever

In the menu, use ▲, ▼ to move menu, ◀, ▶ to change the settings and press ● to select or enter.

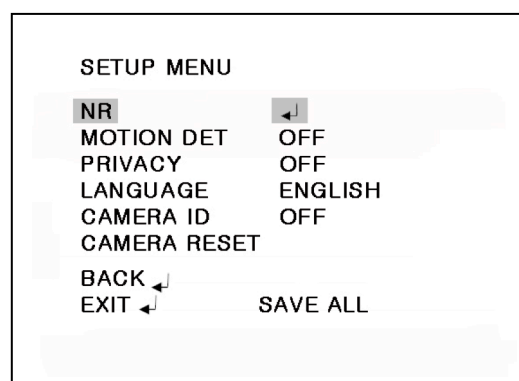
The FACTORY DEFAULT in this manual may NOT be the same as the default values set by the FACTORY due to feature improvements or customer requirements.
To enter the menu, press ●.

6.2 MAIN menu

Follow the chart below for submenu settings.



MAIN Menu-1



MAIN Menu-2

6.2.1 MAIN menu-1

MAIN menu-1	Default	Descriptions
SHUTTER /AGC	AUTO	Sets the parameters related to the shutter mode and AGC for AUTO and MANUAL settings. See '6.3 SHUTTER/AGC menu' for details.
LENS	AUTO	Selects the lens type, AUTO or MANUAL. AUTO supports DC auto-iris lens only. See '6.4 LENS menu' for details.
DAY/NIGHT	EXT1 (w/ IR LED) AUTO (w/o IR LED)	Can set DAY/NIGHT to AUTO, COLOR, BW, EXT1 and EXT2. AUTO - Must be used only for a camera with NO IR LEDs. Camera switches DAY from/to NIGHT automatically along with the amount of light through the lens.. BURST, DELAY CNT, DAY→NIGHT, NIGHT→DAY can be set. See 'DAY/NIGHT menu' for details. COLOR - DAY/NIGHT is disabled and forces to DAY mode only. BW - DAY/NIGHT is disabled and forces to NIGHT mode only. Camera switches its IR cut filter out and outputs BW video. EXT1 - Must be used only for a camera equipped with IR LEDs. DAY/NIGHT is switched by the external light sensor. EXT2 - NEVER USE this mode.
PICT ADJUST	-	Sets MIRROR, BRIGHTNESS, CONTRAST, SHARPNESS, HUE or GAIN. See '6.6 PICT ADJUST menu' for details.
WHITE BAL	ATW	Sets ATW, PUSH, USER1, USER2, ANTI CR, MANUAL or PUSH LOCK. See '6.7 WHITE BAL menu' for details.
ATR	OFF	Sets ON/OFF for enabling/disabling ATR (Adaptive Tone Reproduction) compensation for the better dynamic range (E-WDR) of the image. See '6.8 ATR menu' to adjust the dynamic ranges.
BACKLIGHT	OFF	Selects BACKLIGHT mode out of OFF, HLC or BLC. Areas and gains for HLC and BLC are factory preset and not user adjustable.
NEXT		Moves to MAIN menu-2.
EXIT		Exits the setup menu. To save the changes, move cursor to 'SAVE ALL' and press ● button before exiting the setup menu
SAVE ALL		Saves all parameters by pressing ● button when cursor is on 'SAVE ALL'

6.2.1 MAIN menu-2

MAIN menu-2	Default	Descriptions
NR	-	Sets the noise reduction parameters for NR MODE and Y LEVEL, C LEVEL. See '6.10 NR menu' for details.
MOTION DET	OFF	Sets ON/OFF for enabling/disabling MOTION DET. See '6.11 MOTION DET menu' for the parameter settings.
PRIVACY	OFF	Sets ON/OFF for enabling/disabling PRIVACY. See '6.12 PRIVACY menu' for the parameter settings.
LANGUAGE	ENGLISH	Selects the language out of 7 languages.
CAMERA ID	OFF	Sets ON/OFF for enabling/disabling of ID display. Factory default ID is Software version of camera. User programmed camera ID will be lost and restored with Factory default ID by CAMERA RESET. See '6.13 ID menu' for editing ID.
CAMERA RESET		Restores FACTORY DEFAULT. To save the restored parameters, move cursor to 'SAVE ALL' and press ● button before exiting the setup menu.
BACK		Returns to MAIN menu-1.
EXIT		Exits the setup menu. To save the changes, move cursor to 'SAVE ALL' and press ● button before exiting the setup menu
SAVE ALL		Saves all settings by pressing ● button when cursor is on 'SAVEALL'

6.3 SHUTTER/AGC menu

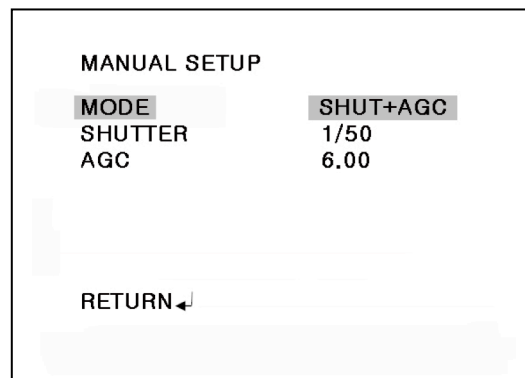
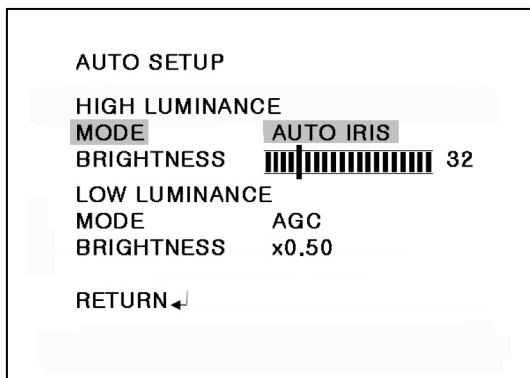
This menu shows how to control/select SHUTTER, AUTO IRIS and AGC to get the optimum image for high luminance and the low luminance according to the scene.

For example, to reduce the “wash out” and extend the dynamic range for a highlighted scene, you will use SHUTTER+AUTO IRIS in outdoor daylight. This mode may show color rolling or video level hunting problems in a certain lighting condition such as fluorescent lights.

For Flickerless mode which reduces flicker by NTSC cameras under 50Hz light or PAL camera under 60Hz light, MAIN>SHUTTER/AGC>MANUAL>SHUTTER must be set to 1/100(NTSC), 1/120(PAL) and MAIN>SHUTTER/AGC>AUTO>MODE to AUTO IRIS. Normal shutter speed with an auto iris lens should be set to 1/60(NTSC) and 1/50(PAL) for the optimum sensitivity.

This is a complicated menu so please proceed with care when handling the Shutter.

To enter SHUTTER/AGC menu, press ● button at MAIN **menu-1**>SHUTTER/AGC.



6.3.1 SHUTTER/AGC>AUTO SETUP menu

AUTO SETUP		Default	Descriptions
HIGH LUMINANCE	MODE	AUTO IRIS	<p>Sets the shutter mode from AUTO IRIS or SHUT+AUTO IRIS when in MAIN>LENS>AUTO menu, but it is fixed to SHUT if in the MAIN>LENS>MANUAL menu.</p> <p>AUTO IRIS - Light level is controlled by an auto iris lens only. For proper auto iris operation, the auto iris operation mode in MAIN>LENS>AUTO>MODE must be set to AUTO.</p> <p>The shutter speed is fixed to the setting at MAIN>SHUTTER/AGC>MANUAL>SHUTTER in this mode.</p> <p>Set SHUTTER to 1/60(NTSC) or 1/50(PAL) for the best sensitivity unless it is in Flickerless mode.</p> <p>To set Flickerless mode, MAIN>SHUTTER/AGC>MANUAL>SHUTTER must be set to 1/100(NTSC), 1/120(PAL) and MAIN>SHUTTER/AGC>AUTO>MODE to AUTO IRIS.</p> <p>SHUT+AUTO IRIS- Light level is controlled by the combination of an auto iris lens and a shutter control to improve the highlight from wash-out and extend the dynamic range. Shutter speed can vary between 1/60 (1/50) ~ 1/10,000 sec.</p> <p>This mode can enhance the overall video quality of daylight but may show a smear in a bright spot light or may show color rolling or video level hunting under a certain lighting condition such as fluorescent lights.</p>
	BRIGHT-NESS	032	Adjusts the brightness of the image with an auto iris lens or a shutter speed control + an auto iris lens.
LOW LUMINANCE	MODE	AGC	Sets AGC to compensate the video level when the scene is dim.
	BRIGHT-NESS	x0.50	<p>Sets the brightness level which starts AGC from x0.25, x0.50, x0.75 and x1.0 of full video level.</p> <p>If set to x0.50, the camera will start AGC when the video level goes down below the 50% level.</p>

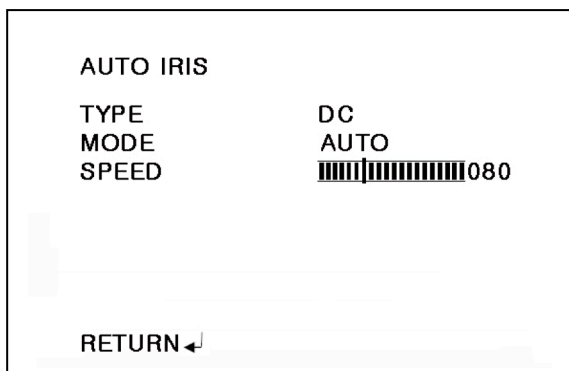
NOTICE : The setting AUTO IRIS at SHUTTER/AGC>AUTO SETUP>HIGH LUMINANCE MODE will be changed to SHUT+AUTO IRIS if MAIN menu-1>LENS is changed to MANUAL. As a result of this, the lens iris can NOT be fully opened when MAIN menu-1>LENS>AUTO IRIS> MODE is OPEN. This can be recovered by setting SHUTTER/AGC>AUTO SETUP>HIGH LUMINANCE MODE to AUTO IRIS.

6.3.2 SHUTTER/AGC>MANUAL SETUP menu

MANUAL SETUP	Default	Descriptions
MODE	SHUT +AGC	Compensates the video level by the manual shutter control and AGC.
SHUTTER	1/60 (1/50)	Sets the manual shutter to 1/60(1/50), 1/100(1/120), 1/250,1/500,1/1000, 1/2000,1/4000 or 1/10000. Manual shutter is only useful for scenes where luminance is unchanged.
AGC	6.00	Sets AGC gain in dB. Higher gain compensates brighter but noise increases. Manual AGC can be set to 6, 12, 18, 24, 30, 36, 42 or 44.8 dB.

6.4 LENS menu

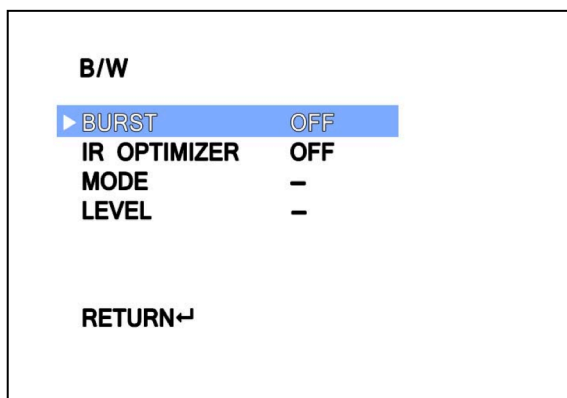
To enter LENS menu, press ● button at MAIN menu-1>LENS>AUTO.



AUTO IRIS	Default	Descriptions
TYPE	DC	<u>MUST BE SET TO DC ONLY.</u> This camera does NOT support video type auto iris lens.
MODE	AUTO	AUTO - Lens iris is automatically controlled according to the scene's light level. OPEN - Lens is fully opened regardless of the light level. CLOSE - Lens is fully closed.
SPEED	080	Adjusts the iris control speed. The lower the value, the faster the speed. If the speed is too slow or fast, the iris control may be unstable.

6.5 DAY/NIGHT menu

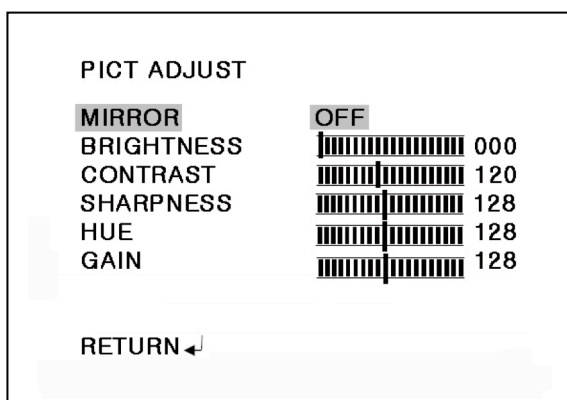
To enter DAY/NIGHT menu, press **•** button at MAIN **menu-1**>DAY/NIGHT.



DAY/NIGHT	Default	Descriptions
IR OPTIMIZER	OFF	IR OPTIMIZER feature can reduce the over-saturation in video caused by the narrow emitting IR LEDs OFF - Disables IR OPTIMIZER. ON - Enables IR OPTIMIZER.
MODE	AUTO	There are two modes available by how to manage IR OPTIMIZER. AUTO - Reducing the over-saturation is automatically adjusted along with the location of the subject. CENTER - Center area is prioritized to reduce the over-saturation. Over-saturation in the side area could be ignored.
LEVEL	015	Overall brightness is adjusted when IR OPTIMIZER is working. High value in LEVEL increases the brightness but the over-saturation could occur. Low value in LEVEL decreases the brightness and the dim area could be darker.

6.6 PICT ADJUST menu

To enter PICT ADJUST menu, press **•** button at MAIN **menu-1**>PICT ADJUST.



PICT ADJUST	Default	Descriptions
MIRROR	OFF	Picture will be flipped horizontally if it turns ON.
BRIGHTNESS	000	Increases or decreases the brightness of the picture. This is different from that of DC iris lens and simply increases or decreases the digital gain of the video. Do not increase this too much, the dynamic range for the highlight area will decrease.
CONTRAST	120	Increases or decreases the contrast of the picture.
SHARPNESS	128	Increases or decreases the sharpness of the picture. Too much sharpness can make the image appear harsh and will show more noise. It may also show line flicker at the edge of object in the picture.
HUE	128	Adjusts hue for NTSC version only.
GAIN	128	Increases or decreases the color gain of the picture.

6.7 WHITE BAL menu

White balance can be set to **ATW**, **PUSH**, **USER1**, **USER2**, **ANTI CR**, **MANUAL** or **PUSH LOCK**.

ATW (Auto Tracking White balance) and **PUSH** (Full pull-in) is continuously monitoring/analyzing the color temperature of the incoming light and correcting the white balance.

ATW limits the color temperature range to about 2,500°K~8,500°K to reduce the excessive compensation for a large object that has a single color.

PUSH has no limits between about 1,800°K~10,500°K, but it may over-compensate the white balance for a large object that has a single color.

In cases under 2,500°K such as halogen light, ATW may stop and if so, **PUSH** mode is recommended.

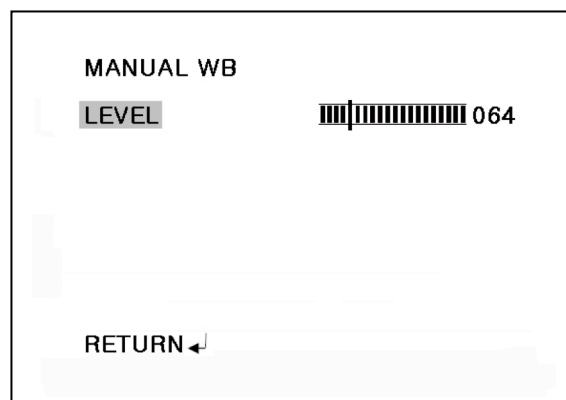
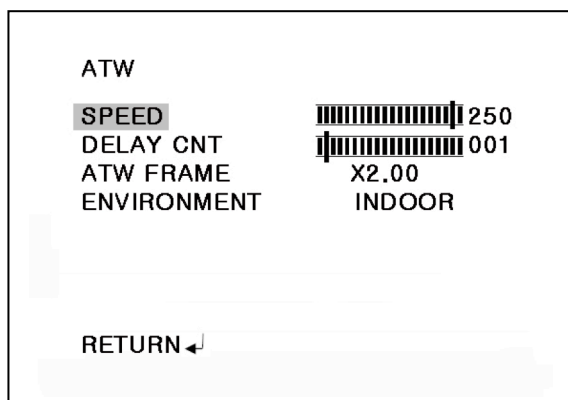
USER1 and **USER2** are a fixed white balance which is user-programmable by R-GAIN and B-GAIN and useful only for consistent/steady lighting.

ANTI CR (Anti Color Rolling) can reduce color rolling under fluorescent lighting when the camera operates in shutter control mode without an auto iris lens. (NTSC version only).

MANUAL white balance is a kind of fixed white balance that is user-programmable by B-GAIN, (R-GAIN will be automatically adjusted in accordance with B-GAIN) and useful only with consistent/steady lighting.

PUSH LOCK is a fixed white balance where the white balance is compensated only while ● button is pressed at MAIN>WHITE BAL>PUSH LOCK and finishes the white balance when ● button is released.

To enter ATW (MANUAL) menu, press ● button at MAIN **menu-1**>WHITE BAL>ATW(MANUAL).



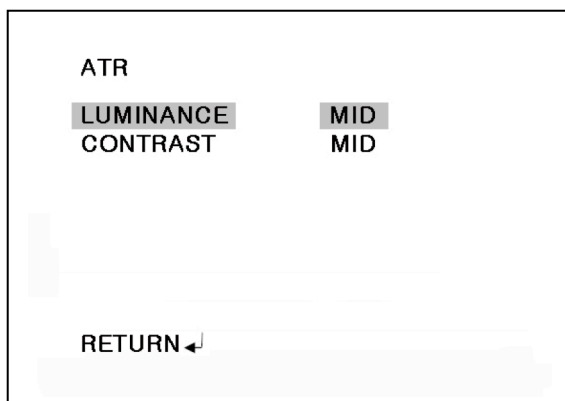
ATW	Default	Descriptions
SPEED	250	Sets the AWB compensating speed. Lower value makes AWB faster. CAUTION If AWB is too fast, it may produce color oscillation.
DELAY CNT	001	Adjusts the AWB compensation period to next update of AWB. The smaller value will update AWB more frequently.
ATW FRAME	X2.00	Determines the ATW range with respect to the fundamental range. A higher value than x1.00 will extend the ATW range at lower and higher color temperature.
ENVIRON- MENT	INDOOR	Selects INDOOR or OUTDOOR. The ATW is optimized for limited applications. INDOOR - Optimized for Indoor installation and it compensates ATW for low color temperature such as incandescent lights. OUTDOOR - Optimized for outdoor sunlit applications and compensates ATW for high color temperature such as daylight.

MANUAL WB	Default	Descriptions
LEVEL	064	Adjusts the manual white balance by LEVEL, where is B-GAIN.

6.8 ATR (Adaptive Tone Reproduction) Menu

The ATR feature improves the dynamic range and the visibility of the image by providing optimal gradation compensation of the image in one field. This is achieved by two ways of image processing, luminance compression and contrast enhancement, so that the tone can be enhanced in highlight and dark areas.

To enter ATR menu, press **•** button at MAIN **menu-1**>ATR.



ATR	Default	Descriptions
LUMINANCE	MID	Compresses the highlight area and enhances the dark area so that the entire image can converge toward the medium level. LOW will compensate minimally and HIGH will be level out the image more. With a HIGH setting, the image may look less contrastive and noise may increase in the dark area.
CONTRAST	MID	Adjusts the strength of the image contrast. If set to too high, the dark area may loss detail and the high luminance area may saturate. ¹⁴

6.9 BACKLIGHT menu

To enter BACKLIGHT menu, press ● button in MAIN menu-1>BACKLIGHT.

The Backlight Compensation – BLC – function is used to brighten an image in the foreground with a highly lit area behind it such as sunlight, limiting the affect of silhouetting.

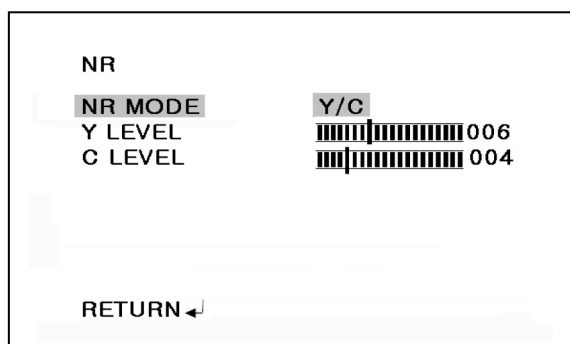


The Highlight Compensation – HLC – function is used to black out highlighted areas that may blind the camera, in order to enable a clear visual image of objects, such as the license plates of an oncoming vehicle or other objects that may be obstructed by headlamps.



6.10 NR menu

To enter NR menu, press ● button at MAIN menu-2>NR.

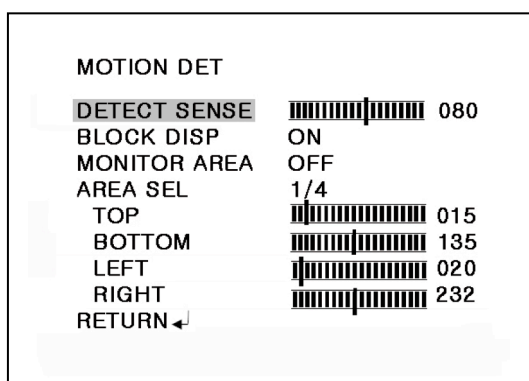


NR	Default	Descriptions
NR MODE	Y/C	Selects OFF, Y, C or Y/C, which noise reduction is performed with.
Y LEVEL	006	Indicates the noise reduction strength for the luminance signal. A higher value performs a stronger noise reduction, which makes the image less sharp. Due to the limitation of 2D NR, noise reduction may not be effective enough.
C LEVEL	004	Indicates the noise reduction strength for the chrominance signal. A higher value performs a stronger noise reduction and makes the image less sharp. Due to the limitation of 2D NR, noise reduction may not be effective enough.

6.11 MOTION DET menu

Up to 4 motion detection areas are available and each area is programmable in size and location. The motion is displayed by means of blocks when MAIN **menu-2**>MOTION DET and MOTION DET>BLOCK DISP are ON.

To enter MOTION DET menu, press **•** button at MAIN **menu-2**>MOTION DET>ON.

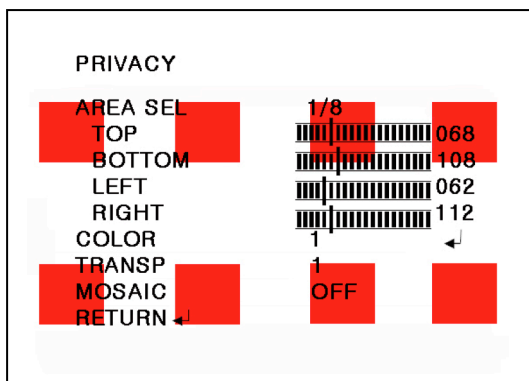


MOTION DET	Default	Descriptions
DETECT SENSE	080	Adjusts the sensitivity for detecting motion. Higher value is more sensitive.
BLOCK DISP	ON	Enables or disables display blocks for the area where motion is detected.
MONITOR AREA	OFF	Displays four motion windows as programmed in sizes and positions.
AREA SEL	1/4	Selects one of AREA1~AREA4 to be adjusted. TOP (BOTTOM) - ◀ button moves up and ▶ button moves down the top (bottom) border of the selected window at AREA SEL. LEFT (RIGHT) - ◀ button moves left and ▶ button moves right the left (right) border of the selected window at AREA SEL

6.12 PRIVACY menu

Up to 8 privacy areas are available and each area is programmable in size and location.
The number of privacy areas is limited to four when MOTION DET>MONITOR AREA is ON.
The privacy areas are masked with the color selected by PRIVACY>COLOR.

To enter PRIVACY menu, press ● button at MAIN **menu-2**>PRIVACY>ON.



PRIVACY	Default	Descriptions
AREA SEL	1/8	Selects one of AREA1~AREA8 to be adjusted. TOP (BOTTOM) - ◀ button moves up and ▶ button moves down the top (bottom) border of the selected window at AREA SEL. LEFT (RIGHT) - ◀ button moves left and ▶ button moves right the left (right) border of the selected window at AREA SEL
COLOR	1	Sets one of 8 colors for the selected mask window at AREA SEL.
TRANSP	1.00	Transparency rate for the mask can be adjusted. 0.00 - Mask is fully transparent and not visible. 0.50 - Mask is 50% transparent. 0.75 - Mask is 25% transparent. 1.00 - Mask is not transparent.
MOSAIC	OFF	Enables or disables the mosaic effect for the selected mask window at AREA SEL

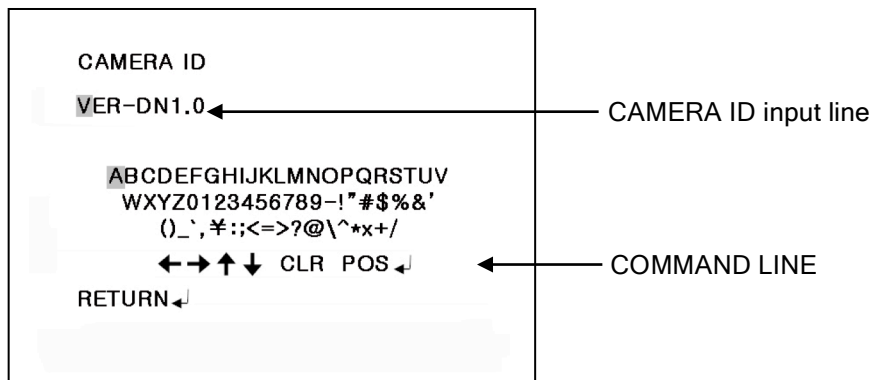
6.13 LANGUAGE menu

ENGLISH, JAPANESE, DEUTCH, FRANCAIS, RUSSIAN, PORTUGUES and ESPANOL

6.14 CAMERA ID menu

Up to 40 characters can be input for camera ID.

To enter CAMERA ID menu, press ● button at MAIN menu-2>CAMERA ID.



Use ▲, ▼, ◀, ▶ buttons to move a block cursor over the character table and press ● button to input the selected character.

To move the character input position on CAMERA ID input line, move a cursor to ←→ on COMMAND LINE and press ● button on ← or →.

To clear CAMERA ID input line, move a cursor to CLR on COMMAND LINE and press ● button.

To set the location of CAM TITLE to be displayed on the monitor, move a cursor to POS and press ● button

and then menu disappears and CAMERA ID will be displayed on the monitor.

Move CAMERA ID by using ▲, ▼, ◀, ▶ buttons and press ● button to fix.

Menu will appear again.

To finish CAM TITLE menu, press ● button on RET on command line.

6.15 CAMERA RESET

Camera loads Factory defaults.

To save them, go to SAVE ALL and press ● button.

6.16 EXIT

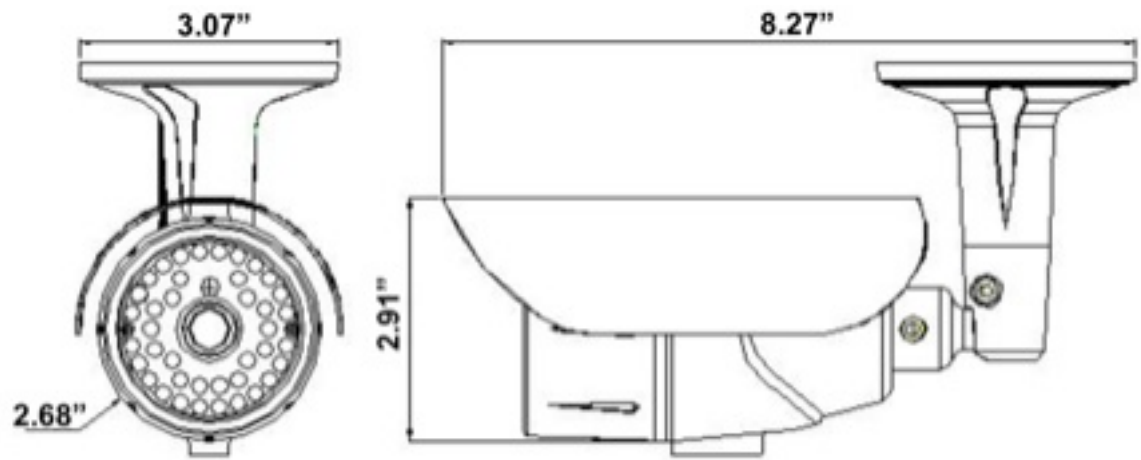
Exits SETUP MENU and returns to the normal display

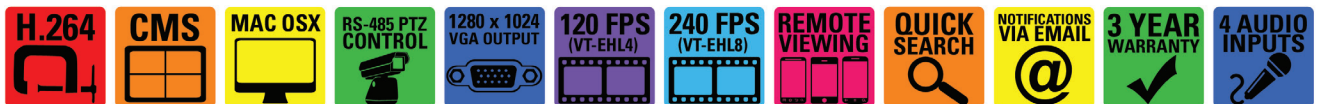
7. Specifications

VTC-IRE30/2810	
Image Device	1/3" High Density Sony EX-VIEW CCD & Effio-E DSP (960H)
Resolution	700 TV lines
Minimum illumination	0.003Lux / F1.2 (0 Lux with IR LEDs ON)
Effective Pixels	976(H) x 494(V)
S/N Ratio	More than 52dB with AGC OFF at 50IRE
Electronic Iris	1/60 to 1/100,000 sec.
Infrared LEDs	30 850nm IR LEDs
IR Distance	Over 100 Feet
Day/Night	Auto
Built-In Lens	IR Corrected 2.8-10mm DC Auto Iris Lens
Iris Mode	DC Drive Iris Control (Internally Fixed)
White Balance	1,800~10,500°K Automatic Tracking
Gain Control	Auto
Flicker Reduction	Yes
Video Output	VBS 1 Vpp +/- 10%, 75ohm
TV System	2:1 Interlace
Scan Frequency	59.94Hz(V), 15.734Khz(V)
Synchronization	Internal/Line Lock (Default: Internal)
Light Compensation	HLC (Highlight Compensation) / BLC (Backlight Compensation)
Noise Reduction	2DNR
E-WDR	YES by ATR (Adaptive Tone Reproduction)
Motion Detection	YES
Privacy Mask	Up to 8 Programmable Mask Areas
OSD Language	English, Japanese, German, French, Russian, Portuguese, Spanish
Water Resistance	IP66
Construction	Aluminum Housing
Power Source	12VDC/24VAC (Dual Voltage)
Power Consumption (12VDC)	110mA / 455mA (IR OFF/ON)
Power Consumption (24VAC)	120mA / 400mA (IR OFF/ON)
Operating Conditions	-4°F ~ 122°F (-20°C ~ 50°C) / 85% RH Max
Length	Ceiling Mounted: 7.25" (184mm) / Wall Mounted: 8.9" (226mm)
Width	Camera: 2.5" (64mm) / Camera w/Sun Shield: 3.5" (89mm)
Height	Ceiling Mounted: 4.5" (114mm)
Weight	1.21 lbs (550g)

- Design and specifications are subject to change for product improvements without prior notice.

8. Dimensional Drawings





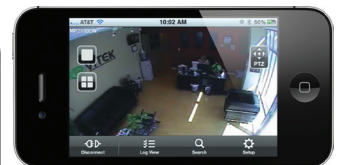
VT-EHL 4 & 8 Channel H.264 Digital Video Recorders

Simplicity and reliability is the basis upon which the EH L Digital Video Recorder was conceived. With almost every powerful feature of its predecessor the "EH", the EHL offers an economical option for providing the most advanced recording solution available. As part of the EH family, the EHL is completely compatible with all VITEK EH Platform application software.

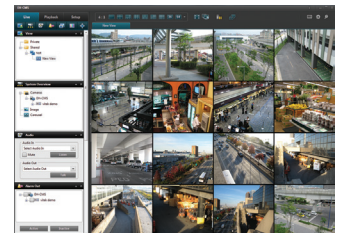
FEATURES:

- 4 or 8 Video Inputs with 1 Main, 1 Spot Monitor Output and 1 VGA output.
- Real Time Recording with Up to 120 IPS at HD1 Recording / Live Display (VT-EHL4) / 240 IPS at CIF (VT-EHL8)
- H.264 Compression
- Supports Static & Dynamic IP Addresses
- 4 Alarm & Audio Inputs / 1 Output
- 500GB to 2TB Internal Storage Options
- Remote Viewing over the Internet, LAN, Explorer, Safari, Firefox, Opera and Chrome
- Applications for iPhone, iPad, iTouch and Droid Devices
- "Quick Search" Function for automatic review
- Mac OSX Client & CMS Central Management Software Included
- Automatic sending of Health & Event notifications via email
- Control locally via Front Panel, USB Mouse or with the Included IR Remote control
- PTZ Control over RS-485

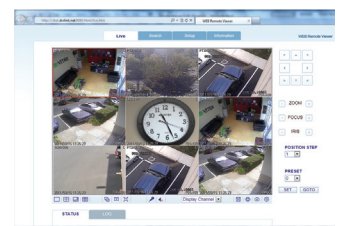
	VT-EHL4	VT-EHL8
Video Input	4 Channels	8 Channels
IPS (Display / Recording)	120 / 120 (HD1)	240 / 240 (CIF)
Video Output	VGA - 1 SXGA (1280 X1024)	
BNC Output	Monitor: 1 Composite(BNC) / Spot: 1 Composite(BNC)	
Audio In/Out	4 Line In (RCA) / 1 Line Out (RCA), CODEC : G.711 (64Kbps)	
Storage	Up to 1 Internal HDD (SATA)	
Archive	USB Device & Network	
USB Port	1 Front +1 Rear	
System Control	Front Panel, USB Mouse, Included IR Remote Control	
Network	TCP/IP, HTTP, DHCP (DDNS)	
RJ-45 Ethernet Port	10M/100M	
Playback Rate	120 fps @ 704x240 60 fps @ 704x480	240 fps @ 352x240 120 fps @ 704x240 60 fps @ 704x480
PTZ	1 - RS-485 - Supports most of PTZ protocols with up to 255 Presets	
Point of Sale (POS)	N/A	
Motion Area Setting	Adjustable GRID(16X16), 10 Steps Sensitivity Level	
Recording Resolution Setting	By each camera for different resolution setting(CIF/2CIF/D1)	
Recording Quality Control	4 Levels (Low/Standard/High/Highest)	
E-mail notification	E-mails to specific users to notify events	
System Configuration	Full setup configuration over network	
Bandwidth limit	YES: Adjustable by User	
Two-Way Audio	YES	
Case Form Factor	1.3U	



Remote Viewing Apps for iPhone, iPad & Android



Included VT-EH CMS Software allows remote viewing and control of multiple VT-EH Series DVR's even when located at multiple locations!



Remote Viewing from anywhere using Internet Explorer



VT-EHL4 Rear Connections



VT-EHL8 Rear Connections

PROFESSIONAL LCD SERIES

FULL FEATURED SECURITY MONITORS.



VTM-LCD Series

15", 17" & 19" Professional LCD Monitors

Vitek Professional Grade LCD Monitors are designed for constant use in a surveillance application. They combine sharp brilliant colors along with easy to use OSD functions and built in speakers, 3.5mm PC Audio and stereo RCA In/Out connections are provided for versatility and convenience. The VTM-LCD174P and 194P also feature Dual Composite Looping BNC Video and HDMI input along with 800:1 Contrast Ratio delivering Industry Leading Performance and Picture Reproduction. An Easily removable stand and VESA Mounting Capability allow for use in Wall Mounting Applications and optional Swivel Rack Mounts are available: Model VI-LCD174SRM/VI-LCD194SRM.

FEATURES:

- 15", 17", and 19" Professional LCD Display Panels
- Designed for continuous 24/7 operation
- VGA, Looping BNC Composite, and S-Video Video Inputs. HDMI Inputs on 17" & 19" Versions
- Resolution up to 1280 X 1024 (17" & 19")
- Rated for up to a 50,000 Hour Panel Life (17" & 19")
- Stereo Audio Input/Output
- Multi-Language OSD (On Screen Display) with Front Panel Controls
- VESA Standard Mounting
- Optional Swivel Rack Mounts (17" & 19")

	VTM-LCD154P	VTM-LCD174P	VTM-LCD194P
Panel Type	15" TFT Color LCD	17" TFT Color LCD	19" TFT Color LCD
Display Colors	16.2 Million Colors	16.2 Million Colors	16.2 Million Colors
Pixel Pitch	0.297 mm	0.264 mm	0.294 mm
Recommended Resolution	XGA (1024x768)	WXGA (1280 x 1024)	WXGA (1280 x 1024)
Contrast Ratio	700:1	800:1	800:1
Brightness	260 cd/m2	300 cd/m2	300 cd/m2
Viewing Angle	H: 80 degrees V: 80 degrees	H: 160 degrees V: 135 degrees	H: 160 degrees V: 135 degrees
Response Time	<8ms	<5ms	<5ms
Scanning Frequency	H: 31~65kHz V: 56~75Hz	H: 31~65kHz V: 56~75Hz	H: 31~65kHz V: 56~75Hz
Video Inputs/Outputs	Looping BNC Composite	Dual Looping BNC Composite	Dual Looping BNC Composite
S-Video Input	YES	N/A	N/A
PC Inputs	15 pin D-Sub (Analog RGB)	15 pin D-Sub (Analog RGB)	15 pin D-Sub (Analog RGB)
HDMI Inputs	N/A	YES	YES
Audio Inputs	Stereo RCA In / 3.5mm In/Out	Stereo RCA In / 3.5mm	Stereo RCA In / 3.5mm
Screen Control	OSD (On Screen Display Menu)	OSD (On Screen Display Menu)	OSD (On Screen Display Menu)
LCD Lamp	30,000 hours	50,000 hours	50,000 hours
VESA Mountable	YES	YES	YES
Rack Mount Available	N/A	YES - Model VT-LCD174SRM	YES - Model VT-LCD194SRM
Weight	5.3lbs. (2.4kg)	7.7lbs. (3.49kg)	9.9lbs. (4.49kg)
Power Supply	AC 100~240V 50/60Hz	AC 100~240V 50/60Hz	AC 100~240V 50/60Hz
Dimensions (w/o Stand)	13.4" x 11.2" x 1.97" (340 x 284 x 50mm)	14.57" x 12.7" x 1.97" (370 x 322 x 50mm)	16.5" x 14.2" x 2.2" (419 x 360 x 56mm)



VTM-LCD154P Rear Inputs



VTM-LCD174P & VTM-LCD194P Rear Inputs

VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. Digital recording and storage products are also warranted for 3 years except for the hard drives which carry their own independent factory warranty from the hard drive manufacturer. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a Vitek Authorized Reseller.

"Alpha Series by VITEK" products carry a three (3) year limited warranty. All other factors of the standard VITEK warranty will apply as stated above. ** Three Year "Alpha Series by VITEK" Warranty effective September 1st 2010. "Alpha Series by VITEK" products purchased prior to September 1st 2010 carry a one (1) year warranty.

** Three Year Warranty on all products except Alpha Series became effective on April 1st 2009. Legacy Products purchased prior to April 1st 2009 carry a two (2) year warranty.

This warranty shall not apply to repairs or replacements necessitated by any cause beyond the control of VITEK, including but not limited to, acts of nature, improper installation, excess moisture, misuse, lack of proper maintenance, accident, voltage fluctuations, or any unauthorized tampering, repairs or modifications. This warranty becomes VOID in the event of alteration, defacement, or removal of serial numbers.

Within the first 6 months of purchase, VITEK will replace or credit any defective product at the request of the customer (subject to availability) with a new product that equals or exceeds the performance of the original product purchased.

Within the first 6 months of purchase, at its sole discretion, VITEK may issue an advance replacement for a defective product; however, all related costs including, but not limited to shipping and/or delivery charges will be the responsibility of the customer. If upon return inspection a product is determined to be in good working order or shows evidence of misuse, the customer will be responsible for full payment of the original product purchased as well as the replacement product.

Beyond the first 6 month period for the remainder of the warranty, VITEK'S responsibility shall be limited to repairing the defective product, including all necessary parts and related labor costs. At its sole discretion, VITEK may choose to either exchange a defective product or issue a merchandise credit towards future product purchases. Any replacement parts furnished in connection with this warranty shall be warranted for a period not to exceed the remaining balance of the original equipment warranty.

A Return Authorization number or "RA" number must be obtained prior to the return of any item for repair, replacement, or credit. VITEK requires that this "RA" number be clearly printed on the outside of the shipping carton to avoid refusal of said shipment. The Return Authorization number expires after 30 days. Products returned after the 30 day period will be subject to refusal. Shipping charges, if any, must be prepaid. A copy of the bill of sale (or invoice of purchase), together with a complete written explanation of the problem must accompany all returns.

Vitek makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a Vitek Authorized Reseller.



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